

BUFFALO DISTRICT, CORPS OF ENGINEERS  
1776 NIAGARA STREET  
BUFFALO, NEW YORK 14207

CELRB-ED  
Regulation  
BR 1110-1-1

31 October 2001

Expires 31 October 2002  
BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY  
AND ENVIRONMENTAL  
DESIGN AND CONSTRUCTION REVIEW PROCEDURES

1. PURPOSE. This regulation establishes the District implementation plan to ensure that biddability, constructibility, operability, and environmental (BCOE) aspects of all projects are considered during the design and again during the preparation of Plans and Specifications and that a Design and Construction Evaluation (DCE) takes place during construction. This BR provides the standard operating procedures for BCOE and DCE reviews, documentation, and evaluation of their effectiveness.

2. BACKGROUND. ER 415-1-11, "CONSTRUCTION, BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY AND ENVIRONMENTAL REVIEW," dated 1 September 1994, directs Division and District Commanders to prepare implementation plans for accomplishing effective BCOE reviews in a timely manner with adequate documentation and to provide a means for evaluating the effectiveness of the reviews.

a. The CELRD Quality Management Plan, and ER 415-1-13, "DESIGN AND CONSTRUCTION EVALUATION (DCE)," dated 29 February 1996, directs districts to develop regulations and procedures for conducting their own Design/Construction Evaluation program to identify quality management failures and problem areas during the construction phase through a feed—back information procedure.

b. The referenced regulations prescribe responsibilities for the Chiefs of Engineering, Construction, and Contracting; examples of what should be covered by the review; and practical guidance on personnel qualifications, organization adjustments, and timing of reviews.

c. The Engineering and Construction-Operation Divisions in the Buffalo District have assumed the role of preparing the implementation plan and will make changes as needed.

d. CELRB Regulation BR 1110-1-4 establishes procedures to be used in reviewing Engineering products by an Independent Technical Review (ITR) team, including Studies, Design Documentation Reports, and Plans & Specifications. This review shall replace that previously performed by the Great Lakes and Ohio River Division. The Independent Technical Review process has been delegated to the District Commander along with Approval Authority for Design Documentation Reports and Plans & Specifications. This review process is conducted separately but concurrently with the BCOE review process described herein. (NOTE: Quality Control Plans (QCPs) for Design Documentation Report on Projects with greater than a \$5 million anticipated construction cost need to be approved by LRD.)

3. **APPLICABILITY.** This regulation is applicable to all District elements involved in design, preparation of Plans and Specifications, implementation of construction contracts, and the maintenance and operation of completed works. Applicable projects are those normally effected through a construction contract. Projects may be excluded upon the recommendation of both the Construction-Operations and Engineering Division Chiefs and the approval of the District Commander. Examples of excludable projects include: (1) standard, reoccurring projects, such as beach nourishment, maintenance dredging, and debris removal upstream of Mt. Morris Dam; especially those occurring on an annual basis, as well as (2) projects of minor scope, short duration and/or minimal cost, such as the Advanced Measures, section 14 and emergency rehabilitation projects. (Note: BCOE 3 is still required for debris removal upstream of Mt. Morris Dam.)

4. **POLICY.** The District will conduct BCOE and DCE reviews of construction projects to obtain the best product obtainable through synergistic efforts of recognized expertise following the regulations and guidance of the Office of the Chief of Engineers and the Great Lakes and Ohio River Division. Reviews will consist of scheduled meetings with oral and written comments by reviewers. Inclusion of appropriate type written comments into the contract documents will be documented, and the Chiefs of Engineering and Construction-Operations Divisions will so certify in writing. Effectiveness of the designs and BCOE reviews will be evaluated during the DCE reviews by considering project time and cost growth and change orders that could have been addressed during constructibility reviews; and by the occurrence of rectification projects or design deficiencies that must be corrected.

5. **BCOE PROCESS.** The client shall be invited to attend all three BCOE meetings. The first BCOE meeting, or "Kickoff meeting," will be held to discuss scope, client requirements, budget, and schedule; and to initiate the Design Phase. This meeting will also serve to establish the design team and to initiate development of the Quality Control Plan. The meeting will be held to initiate preparation of the Design Documentation Reports (DDR) or conceptual design for projects without DDRs. The second BCOE meeting will be held to review the completed Design Documentation Report and to initiate preparation of Plans and Specifications. This meeting serves to ensure that project design is fully understood and will be clearly represented by the Plans and Specifications. The third BCOE meeting will be held to review completed Plans and Specifications (including special clauses) at least 30 days prior to advertisement, and shall run concurrent with the ITR review. This meeting will be held on-site for those projects mutually agreed to by Chief, Engineering Division and Chief, Construction-Operations Division. The purpose of on-site meetings will be to ensure that Plans & Specifications conform to local site conditions and will address the client's concerns. Either the PM, or a member of the project team designated in the Quality Control Plan will lead the site inspection and explain the scope and details of the project. DrChecks shall be the comment tracking mechanism for all BCOE reviews. A specific individual designated in the PMP, shall prepare an After Action Review Report and enter it into DrChecks Corporate Lessons Learned System as the final step of the BCOE Review, as depicted in Appendix O.

## 6. RESPONSIBILITIES.

### a. Chief of Project Management will:

(1) Ensure that adequate time to accomplish BCOE reviews, as outlined in Section 5 above, is included in the project baseline schedule.

(2) Ensure that adequate funds for the accomplishment of BCOE reviews are reserved in the baseline budget as negotiated and included in the Project Management Plan.

(3) Ensure that all the required BCOE reviews (i.e. first, second, and third) are conducted and listed in the Project Management Plan and Quality Control Plan

schedules.

b. Chief of Engineering Division will:

(1) Ensure that design schedules include BCOE reviews (Appendix A) and that adequate time is provided. Unless waived by Chief, Engineering Division, design documents and Plans & Specifications will be completed at least 3 weeks prior to the scheduled BCOE meeting, 1 week allotted for the BCOE POC to prepare and distribute the BCOE package and 2 weeks given for review time prior to the meeting.

(2) Provide documents for review and conduct BCOE Reviews 1, 2, and 3.

(3) Evaluate BCOE Review comments.

(4) Ensure that final Plans and Specifications properly reflect applicable BCOE comments.

(5) Ensure that the BCOE records address and resolve all comments by all reviewers or include documentation as to why resolution could not be achieved.

(6) Ensure that BCOE records contain written responses to all comments.

(7) Certify that the BCOE comments have been properly addressed.

(8) Ensure that a memorandum "Engineering Considerations for Field Personnel" is provided by the Design Engineer for each project awarded to ensure that special engineering design concerns are appropriately relayed to the field before construction starts. (NOTE: These should not reiterate elements already covered in the design specifications, but should discuss additional unusual aspects of the project that are of particular concern to the design engineer.)

(9) Require site visit reports for all design personnel visiting a project. These reports must specifically address the purpose of visit and any problems or design changes identified. The site visit trip report will be completed within approximately one week after the completion of the trip. All site visits for projects under construction will be coordinated with the Area Office to ensure that their expertise can be used during the inspection and that their thoughts and concerns are discussed and included in the report. These site visit reports provide management with the feedback findings of all technical personnel visiting a project and shall be maintained by the Area Engineer and be readily available for review by other interested elements of the District. Engineering staff will provide site visit trip reports to Area Office Inspector to attach to the INSPECTORS QUALITY ASSURANCE REPORT (QAR) DAILY LOG OF CONSTRUCTION (ER 415-1-302)

(10) Conduct an annual BCOE review during the February-April time frame.

c. Chief of Construction-Operations will:

(1) Ensure timely BCOE review, representation at BCOE meetings, and participation during the DCE site visits by personnel with construction and/or operations expertise.

(2) Forward all review comments from construction personnel to Engineering Division prior to BCOE meetings.

(3) Certify that applicable comments have been incorporated into the contract documents and that reviewers have acknowledged the disposition of their comments.

(4) At the completion of construction, provide written report to Engineering Division for each project under construction. These reports shall include the positive and negative comments on the design and construction aspects of the project. The intent is to provide meaningful feedback to the project delivery team that can be used to enhance future efforts. These reports, along with the site visit reports maintained by the Area Office, serve as the construction contract quality management system for each project in LRB.

(5) Conduct an annual DCE review meeting.

d. Chief of Contracting shall ensure certifications above have been made before bid opening or that a justifiable waiver, approved by the chiefs of Engineering and Construction-Operations Divisions, is furnished by the Contracting Officer and placed in the contract file.

e. District Commander shall be invited to attend all BCOE 3 Review meetings for projects estimated to be greater than \$5 million in construction cost. Scheduling of these meetings shall be coordinated with the District Commander's schedule by the BCOE POC.

f. **Architect-Engineer Prepared Products:** Architect-Engineer (A-E) firms shall be responsible for preparing their own Quality Control Plans (QCPs) and conducting their own Quality Control Reviews (QCR) at the initial, 35%, 65% and 95% stages of design completion. These A-E QC reviews shall take the place of traditional Government "BCOE" reviews which are discussed in this regulation. The Government A-E Project Engineer/Architect (PE/A) may take part in QC review meetings and Independent Technical Review (ITR) meetings conducted by the A-E, depending on the complexity and size of the project. The A-E performs QC reviews, and the Government performs Quality Assurance (QA) reviews.

The PE/A will serve as the Government Quality Assurance Team (QAT) Leader. The Government QA Team will be responsible for conducting QA reviews on A-E prepared products. QA Team members will be recommended by the QA Team Leader, reviewed by the functional Branch Chiefs, and approved by the Engineering and Construction Division Chiefs. The discipline make-up of the QA team will be dependent on the type of work being performed. QA reviews shall be performed to a level of detail necessary to ensure that Quality Control has been performed by the A-E and that customer needs and Corps Standards have been satisfied. The QA Team Leader shall be responsible for consolidating QA review comments and furnishing to the A-E for incorporation into engineering documents. QA reviews shall focus on, but not be limited to, a review of the A-E's QC Plan, resolution of QC review comments, and resolution of Independent Technical Review comments. The following supporting QC documents shall be prepared and submitted by the A-E to the PE/A for review by the QA Team and the Engineering Division Quality Manager, and shall receive approval by the Chief of Engineering Division:

- A-E Quality Control Plan (QCP)
- A-E Minutes of QC Review Meetings and Comments/Resolution Package
- A-E Independent Technical Review (ITR) Comments/Resolution Package
- A-E ITR Certification
- A-E Quality Control Review Certification (Appendix L)

The following QA documents shall be prepared and submitted by the PE/A and QA Team to the Buffalo District Quality Manager for review, and shall receive approval by the Chief of Engineering Division:

- Buffalo District Quality Assurance Plan (QAP)
- Buffalo District Acceptance of A-E QCP (Appendix M)
- Buffalo District Certification of QA Review & A-E ITR (Appendix N)

For Plans and Specifications, the PE/A shall furnish the Chief of Contracting Division, Chief of Engineering Division, Chief of PPM Division, Chief of C-O Division, Chief of Office of Counsel, and Chief of Real Estate, the A-E's ITR QC Review Certifications and the QA review Team's Certification that Quality Control and Quality Assurance have been performed prior to advertising. All A-E Designs and Plans and Specifications shall be stamped by a Registered Professional Engineer or Registered Architect employed by the firm.

g. BCOE Point of Contact (POC.) ER 5-1-11, states, "Project Teams shall work in concert to deliver projects that are consistent with client's expectations and corporate needs. The PM will ensure that the direction and efforts of the team are unified, focused, and coordinated... The PM shall document and manage commitments to achieve the client's expectations by obtaining agreement on project scope and requirements based on an awareness of applicable laws, policies, and regulations; technical soundness; environmental acceptability; safety and health considerations; and schedule, budget, and resource constraints."

The Project Manager (PM) is responsible for ensuring members of the Project Team do a BCOE. The PM may act as the BCOE POC, or the PM may delegate the duties to a member of the Project Team. The BCOE POC shall be designated in the Project Management Plan (PMP) and Quality Assurance and Quality Control (QA/QC) plans.

h. Client. The Corps' client will be invited to attend all BCOEs.

## 7. PROCEDURES.

a. The District Commander will rely on the Chief, Engineering Division for the District's overall compliance with this regulation.

b. Chief, Engineering Division is responsible for the day-to-day administration of the program and must convey the importance of BCOE and DCE reviews to the Executive Office and to Office and Division Chiefs.

c. The Chief, Engineering Division will sign all BCOE review requests and certify the disposition of the comments. He will also chair the annual BCOE evaluation meeting. The agenda will include:

- (1) Revisions required to the LRB regulation.
- (2) Review of projects for which Plans and Specifications were prepared or advertised during the previous year to verify that BCOE reviews were held in conformance to this regulation.
- (3) Review change orders for cost and time increases attributable to design changes, design deficiencies, and construction problems; and discuss how they may be avoided in the future.
- (4) Review reports of client satisfaction or dissatisfaction received on the contract documents during the previous calendar year.

(5) Review "Engineering Considerations for Field Personnel" memos and discuss possible improvements for future projects

(6) Discuss DCE feedback memos from field personnel.

d. Minutes of the annual evaluation meeting will be signed by the Chief, Engineering Division, and will be used to document that the District has an evaluation procedure to assess and improve the BCOE review process. Minutes of the meeting shall be distributed to all Office Chiefs.

e. Project Managers.

(1) Responsible for developing project schedules for which design documents and Plans and Specifications are to be accomplished, including scheduling BCOE and ITR reviews.

(2) For BCOE reviews, the Project Manager will specify in the PMP and QCP a member of the Project Delivery Team who will:

(a) Make a brief presentation of project description, purpose, schedule, status, concerns, and issues at the beginning of the BCOE meeting.

(b) Organize, assemble, reproduce, and distribute the preliminary design, plans, specifications, and bidding documents, as appropriate, for review of the project.

(c) Complete a Coordination Form (Appendix B) and distribute to selected review element. Organize the Review Meeting using this form.

(d) Provide a checklist (Appendix C&F or D) to each review element.

(e) Provide each review element with a comment sheet (Appendix E). Comments returned on this sheet and those discussed at the BCOE meeting will be acknowledged.

(f) Consolidate and resolve review comments provided on the comment sheets and return to reviewer with Coordination Form.

(g) Maintain a Review Log (Appendix G).

(3) Upon completion of review:

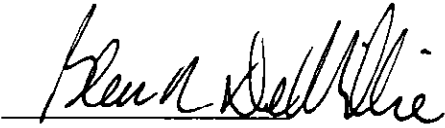
(a) Prepare a memo to files certifying comments have been appropriately incorporated into the Plans and Specifications (Appendix H.) Memo shall be included with back-up documentation and Appendix "G" to Chief, Engineering and Construction—Operations Division. Memo should discuss all major areas of concern and disagreement or state none existed.

(b) Obtain signatures on memo (Appendix H) and Log (Appendix G) by Chief, Engineering and Construction-Operations Division which certifies concurrence, that appropriate comments have been incorporated into the project documents. Also, ensure Chief, Buffalo Real Estate Field Office signs Appendix H.

(c) Obtain signatures on Certification of Legal Review (Appendix I) by District Counsel which certifies that "the plans and specifications for the proposed project, including all associated documents required by the National Environmental Policy Act, have been fully reviewed by the Buffalo District Office of Counsel and are approved as legally sufficient."

(d) Submit certified review package with completed documents (Plans and Specifications) for signature by District Commander using a Technical and Policy Compliance Certification (Appendix J).

(4) Maintain informational copies of returned checklists, comment sheets, and logs from the biddability, constructibility, operability, and environmental reviews until O&M Manual has been completed. Send original signed BCOE and ITR documentation to Engineering Quality Manager, for central filing.



GLEN R. DeWILLIE

LTC, EN

Commanding

#### 13 Appendices

- Appendix A - Purpose of BCOE Reviews
- Appendix B - Routing of BCOE Review
- Appendix C - Checklist for BCOE Review Two
- Appendix D - Checklist for BCOE Review Three
- Appendix E - BCOE Review Comment Sheet
- Appendix F - BCOE Review FIP Checklist
- Appendix G - BCOE Review Log
- Appendix H - BCOE Review Sign Off
- Appendix I - Certification of Legal Review
- Appendix J - Technical and Policy Compliance Certification
- Appendix K - BCOE Exemption Form
- Appendix L - A-E Quality Control Review Certification
- Appendix M - Buffalo District Acceptance of A-E QCP
- Appendix N - Buffalo District Certification of QA Review & A-E ITR

DISTRIBUTION: E

## APPENDIX A

## PURPOSE OF BCOE REVIEWS

I. The first BCOE meeting is to scope the project by reviewing client needs, design parameters, budget and schedule constraints, and to initiate preparation of design. This meeting will also serve to formulate a design team and quality control plan. If either a design charrette process meeting or a technical planning process meeting is held at the start of the design phase, it may serve as the first BCOE. Discussions must answer the following questions:

- a. What types of designs will accomplish the intended function? What alternatives should be evaluated and addressed?
- b. What as-built drawings exist that are applicable?
- c. Is there any new technology applicable?
- d. Have previous designs of similar structures been successful?
- e. What site conditions are present that must be reckoned with (erosion, unstable subgrade, existing utilities, poor drainage, etc.)?
- f. What site testing and engineering studies must be made prior to and during the Design/Plans and Specification phases?
- g. Value Engineering considerations
- h. Environmental considerations to minimize environmental impacts?
- i. Are there any other environmental and construction constraints?
- j. Real Estate Considerations, i.e., rights—of—way?
- k. What are the applicable permit requirements?
- l. Are Local Cooperation Agreements applicable?
- m. Are there any District, Division, or National Lessons Learned applicable to this project?

II. The second BCOE meeting will be held to initiate preparation of the Plans and Specifications and to review the Design Documentation Report. Alternative designs and the design report recommendations to be incorporated into contract documents will be reviewed. The Second BCOE meeting will also cover the following topics:

- a. Summarize any changes (scope, design, etc.) from first BCOE meeting and substantial comments received during second BCOE review.
- b. Discuss schedule and project costs vs. budget.
- c. Identify any omissions, ambiguities, and inadequacies in the design.
- d. Ensure project features and client requirements will be appropriately covered in Plans and Specifications.



- e. Ensure structures are adapted to site conditions and appropriate site testing has been completed and analyzed.
- f. Assess maintenance and operating costs.
- g. Review construction process, phasing of work, critical project features and safety.
- h. Evaluate ease of constructibility, productivity, and trade of f of custom versus standard components.
- i. Discuss Real Estate issues.
- j. Discuss Environmental issues.
- k. FIP Equipment - Required Appendix F.
- l. Incorporate any District, Division, or National Lessons Learned applicable to this project?

III. The third BCOE meeting will be held at the completion of Plans and Specifications to discuss any final changes required and to review what changes have been incorporated into the contract documents as a result of the second BCOE. The third constructibility meeting will be held for the following purposes:

- a. Summarize changes made as a result of the second BCOE and record any final changes required.
- b. Review final design and Plans and Specifications for any remaining omissions, ambiguities, and inadequacies.
- c. Review field test results and representation in Plans and Specifications.
- d. Review as-built drawings and existing field conditions and representation on drawings.
- e. Ensure structures are adapted to site conditions by physically inspecting the project site with all attendees (to include Area Office Representative) to ensure design is in accordance with actual site conditions. On—site meetings will be conducted for those projects mutually agreed to by Chief, Engineering Division and Chief, Construction-Operations Division.
- f. Review final contract documents for performance period, contracting and construction dates, and special clauses/conditions.
- g. Review construction process, phasing of work, project features, and safety issues that are critical to controlling time and cost growth.
- h. Review client requirements and needs.
- i. Discuss resolution of Real Estate issues.
- j. Discuss completed Environmental Impact Statement, and/or NEPA documentation.
- k. Discuss final costs, schedules, and budget.

## APPENDIX B

BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY AND ENVIRONMENTAL REVIEW  
ROUTING

1. TO: \_\_\_\_\_ DATE: \_\_\_\_\_

FROM: Chief, Engineering Division

PROJECT: \_\_\_\_\_

REVIEW NO. \_\_\_\_\_ Will be held in Conference Room \_\_\_\_\_ at \_\_\_\_\_ hrs on \_\_\_\_\_.

Please furnish your comments either before or at the meeting for evaluation. If you have any questions or require further information, please contact the Project POC, \_\_\_\_\_ at extension \_\_\_\_\_.

\_\_\_\_\_  
Chief, Engineering Division2. TO: BCOE POC \_\_\_\_\_ DATE: \_\_\_\_\_  
FROM: \_\_\_\_\_

## CHECK ONE:

- ☐ Please advise me of the disposition of the attached comments.
- ☐ I will accept your disposition of the comments attached for your consideration.
- ☐ No Comments.

Reviewer: \_\_\_\_\_

3. TO: See Distribution DATE: \_\_\_\_\_  
FROM: BCOE POC

Responses to your comments are attached.

BCOE POC: \_\_\_\_\_

4. TO: BCOE POC \_\_\_\_\_ DATE: \_\_\_\_\_  
FROM: \_\_\_\_\_

- ☐ I agree with the disposition of my comments.
- ☐ I disagree with the disposition of my comments, and request a resolution meeting be held on \_\_\_\_\_ to address my concerns.

Reviewer: \_\_\_\_\_

## APPENDIX C

# CHECKLIST FOR BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY AND ENVIRONMENTAL REVIEW TWO

Complete and return to the BCOE POC: \_\_\_\_\_

PROJECT: \_\_\_\_\_

INFLUENCING FACTORS	CONSIDERED			REMARKS
	YES	NO	N/A	
1. Local site conditions and restrictions				
2. Availability of local labor and specified skills				
3. Inclusion of locally produced construction materials				
4. Structure configuration recognizes field conditions				
5. Construction phasing (including weather)				
6. Long lead for construction or equipment items				
7. Special construction or equipment items				
8. Operation and maintenance of completed project				
9. Compatibility with environmental requirements				
10. Handicapped or disabled access provided				
11. Inclusion of maximum energy efficiency				
12. Other aspects peculiar to the project (List below)				
13. FIP Equipment Required (Appendix F)				
N/A - Not Applicable				

Section / Reviewer: \_\_\_\_\_ DATE: \_\_\_\_\_

## APPENDIX D

# CHECKLIST FOR BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY AND ENVIRONMENTAL REVIEW THREE

Complete and return to the BCOE POC: \_\_\_\_\_

PROJECT: \_\_\_\_\_

N/A - Not Applicable

INFLUENCING FACTORS	CONSIDERED			REMARKS
	YES	NO	N/A	
1. Plans & Specs accurately depicts existing conditions and required site adaptation				
2. Size of proposed facilities and utilities are adequate to meet expected demands				
3. Construction is compatible with adjoining facilities, future Landscape maintenance, and inspection activities				
4. Plans consider efficient, safe, and economic operations				
5. Contract performance time, sequencing, submittal, & QC requirements are reasonable				
6. Contractor work area and access to project is sufficient				
7. Specs include coordination between various contractors				
8. The materials and their quality are available and compatible				
9. Bid schedule is sufficient, concise, and complete				
10. Government-furnished property is accurately described				
11. Structural, mechanical, & electrical systems are compatible				
12. Plans & Specs compatible with the EIS				
13. Space is adequate for equip installation and maintenance				
14. Control panels & indicators are sufficient and accessible				
15. Construction considers maximum energy efficiency				
6. Design considers handicap disabled access				

N/A - Not Applicable

Section / Reviewer: \_\_\_\_\_ DATE: \_\_\_\_\_



## APPENDIX F

FIP CHECKLIST FOR BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY  
AND ENVIRONMENTAL REVIEW (1,2, & 3)

Complete and return to the BCOE POC: \_\_\_\_\_

PROJECT: \_\_\_\_\_

The following questions should be answered during every BCOE and contract review.<sup>1</sup> If the answer to any of these questions is "Yes," you must request an IMO review of the proposed action. If the answer to all the questions is "No," only the latest copy of this checklist need be retained with the contract file.

**Construction Contract or Supply Contract:**

1. Will there be any electronic parts included in the work procured as part of this action? ☐ Yes ☐ No
2. Will there be any communications equipment procured as part of this action? Items such as radios, early warning systems, telephones. ☐ Yes ☐ No
3. Will there be any mechanical controls that may have electronic parts procured as part of this action? ☐ Yes ☐ No
4. Can this action result in the contractor providing a piece of equipment that although different from our specification, could be interpreted as a component of a computer? ☐ Yes ☐ No

**Service Contract:**

5. Will the work necessary to do this contract require the contractor to use computer-type equipment? Contracts such as Aerial-Photo-Mapping require the significant use of computer equipment to produce the product. ☐ Yes ☐ No
6. Will this work provide the government a computer product such as a GIS database or commercial statistical database? ☐ Yes ☐ No

<sup>1</sup> This checklist may be completed at any time during the development of a contract requirement. It is encouraged that it be completed as soon as a firm requirement is identified.

## APPENDIX G

## BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY, ENVIRONMENTAL REVIEW LOG

Complete and Return to the BCOE POC: \_\_\_\_\_

PROJECT: \_\_\_\_\_

NOTE: You may modify this reviewer list as appropriate to your project, and include other customers and stakeholders who review the BCOE package.

CERTIFICATION: I certify that all appropriate comments have been incorporated into the project.

REVIEWER		Initial Package	Received Comments	Responses to Comments	Acceptance of Disposition	Notes
-DE	District Engineer					
-CO	C-O Div					
-CO-C	Construction Br					
-CO-T	Operations & Tech Support Br					
-CO-E	Emergency Mgmt Br					
-CO-O	Ohio Area Office					
-CO-OC	Cleveland Project Office					
-CO-N	NY/PA Area Office					
-CO-M	NY/PA O&M					
-CO-OT	Toledo Project Office					
-CO-PB	Plum Brook Office					
-ED	Engineering Division					
ED-M	Engineering Mngmt. Team					
-ED-D	Design Br					
-ED-DD	General Design Team					
-ED-DS	Civ/Struct Design Team					
-ED-DC	Coastal/Geotech Team					
-ED-DE	Cost Engineering Team					
-ED-H	LGL H&H Br					
-ED-HH	H&H Engineering Team					
-ED-HW	Water Control Team					
-ED-E	Environ Eng & Analysis Br					
-ED-EA	Environ Analysis Team					
-ED-EE	Environmental Engr Team					
-ED-EH	Environmental Health Team					
-PM-PM	Project Management Branch					
-PM-F	FUSRAP Mgmt. Team					
-PM-PL	Planning Branch					
-OC	Office of Counsel					
-SO	Safety Office					
-CT	Contracting Division					
-RE	Real Estate					

John L. Landahl, P.E., Chief of Engineering &amp; Construction-Operations Division

Date

## Appendix H

BIDDABILITY, CONSTRUCTIBILITY, OPERABILITY,  
AND ENVIRONMENTAL (BCOE) REVIEW SIGN OFF

1. PROJECT NAME: \_\_\_\_\_

2. PROJECT DESCRIPTION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. OUTSTANDING ISSUES: ☐ None ☐ Listed Below

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

4. All applicable BCOE issues and comments have been addressed and when applicable were incorporated in the plans and specifications for this project.

\_\_\_\_\_  
BCOE Point of Contact\_\_\_\_\_  
Date\_\_\_\_\_  
Project Manager\_\_\_\_\_  
Date\_\_\_\_\_  
Lawrence R. Dunfee, Chief, Buffalo Real Estate Field Office\_\_\_\_\_  
Date\_\_\_\_\_  
John L. Landahl, P.E., Chief of Engineering  
and Construction-Operations Division\_\_\_\_\_  
Date



## Appendix I

## CERTIFICATION OF LEGAL REVIEW

PROJECT NAME: \_\_\_\_\_

PROJECT DESCRIPTION: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

The plans and specifications for the proposed project, including all associated documents required by the National Environmental Policy Act, have been fully reviewed by the Buffalo District Office of Counsel and are approved as legally sufficient.

\_\_\_\_\_  
H. Frank Parson Esq., District Counsel\_\_\_\_\_  
Date

## Appendix J

## TECHNICAL AND POLICY COMPLIANCE CERTIFICATION

PROJECT NAME: \_\_\_\_\_

## 1. References:

- a. CELRD Circular 5-1-1, CELRD's Quality Management Plan, Expires 15 January 2001.  
<http://www.lrd.usace.army.mil/lm/qmp.htm>
- b. CELRB's Quality Management Plan, September 1999.
- c. EC 1165-2-203, Technical and Policy Compliance Review, 15 October 1996.  
<http://144.3.144.209/corpusdata/usace/inet/usace-docs/s-r/ec1165-2-203/entire.pdf>
- d. BR 1110-1-4, Independent Technical Review Procedures, 26 March 1997.
- e. BR 1110-1-1, Biddability, Constructibility, Operability, and Environmental Design and Construction Review Procedures, 31 October 2001.

2. The undersigned certifies that all issues concerning final plans and specifications for the subject project have been resolved.

\_\_\_\_\_  
John L. Landahl, P.E., Chief of Engineering  
and Construction-Operations Division

\_\_\_\_\_  
Date

\_\_\_\_\_  
Glen R. DeWillie  
LTC, EN  
Commanding

\_\_\_\_\_  
Date

Appendix K  
**BCOE EXEMPTION FORM**

**Project Name:** \_\_\_\_\_

**Program:**    ☐ O&M    ☐ CAP    ☐ HTRW    ☐ SFO    ☐ GI    ☐ CG

**Purpose:** Request exclusion from listed BCOE components, as permitted by BR 1110-1-1, paragraph 3 - Applicability: "Projects may be excluded upon approval of both the Chiefs of Construction-Operations and Engineering Divisions. Examples of excludable projects include: (1) standard, reoccurring projects, such as beach nourishment or maintenance dredging, especially that occurring on an annual basis, as well as (2) projects of minor scope and/or short duration and/or minimal cost, such as the advanced measures, section 14, and emergency rehabilitation projects."

**Description of Project:**

---



---



---



---

**Client:** \_\_\_\_\_

**Exclude:**    ☐ BCOE 1    ☐ BCOE 2

(NOTE: BCOE 3 is required on all projects.)

**Project Duration:**

Preparation of Plans & Specs: ☐ 1-3 months    ☐ 3-6 months    ☐ > 6 months

Construction: ☐ 1-3 months    ☐ 3-6 months    ☐ 6-12 months    ☐ >1 year

Total Project Duration: ☐ < 6 months    ☐ 6-12 months    ☐ 1-2 years    ☐ > 2 years

**Construction Costs:** ☐ < \$100K    ☐ \$100K - \$500K    ☐ \$500K - \$1,000K    ☐ > \$1,000K

**Is this a standard, reoccurring project?**    ☐ Yes    ☐ No

How often does LRB do projects like this one? ☐ > 1/yr    ☐ 1 every 2-3 years    ☐ Never

Do we do this work at THIS SITE on an annual or semi-annual basis (i.e., dredging)? ☐ Yes    ☐ No

**Has the Corps attempted to do this project at this site in the past?**    ☐ Yes    ☐ No

What kept it from being completed?

---

---

---

**Prepared by:**

---

Project Manager

---

Date

**Recommended by:**

---

Richard J. Gorecki, P.E. Chief of Design Branch

---

Date

**Approved by:**

---

John L. Landahl, P.E., Chief of Engineering  
and Construction-Operations Division

---

Date

## Appendix L

## QUALITY CONTROL REVIEW SIGN OFF

1. PROJECT NAME: \_\_\_\_\_

2. PROJECT DESCRIPTION: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_3. OUTSTANDING ISSUES: ☐ None ☐ Listed Below  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. All applicable Quality Control issues and comments have been addressed and when applicable were incorporated in the plans and specifications for this project.

\_\_\_\_\_  
A-E Quality Manager\_\_\_\_\_  
Date\_\_\_\_\_  
A-E Project Manager\_\_\_\_\_  
Date\_\_\_\_\_  
A-E Principal\_\_\_\_\_  
Date

## Appendix M

**Buffalo District Acceptance of A-E QCP**

*(To be used by the Buffalo District to certify that an A-E or other Government contractor has completed a Quality Control Plan (QCP) and that the Buffalo District has completed QA of that QCP)*

**COMPLETION OF QUALITY CONTROL PLAN****And Buffalo District Quality Assurance Review of QCP**

The (Government Contractor Name) has completed the Quality Control Plan for (type of study) of (project name and location). The project delivery team and independent technical review team has been selected and are appropriate to the level of risk and complexity inherent in the project as defined in the Quality Control Plan. The District has reviewed the QCP for the subject project and it is in compliance with the contract requirements.

**Reviewed by:**

---

Project Engineer, Quality Assurance Team Leader

---

Date

---

Project Manager

---

Date

---

Engineering Quality Manager

---

Date**Concurred by:**

---

John L. Landahl, P.E., Chief of Engineering  
and Construction-Operations Division

---

Date

## Appendix N

**Buffalo District Certification of QA Review & A-E ITR**

*(To be used by the District to certify that an A-E or other Government contractor has completed the design and/or ITR and that the District has completed QA)*

**COMPLETION OF INDEPENDENT TECHNICAL REVIEW****And QUALITY ASSURANCE REVIEW**

The (Government Contractor Name) has completed the (type of study) of (project name and location). Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing Corps policy. The study/design was accomplished by (design agent's name) and the independent technical review was accomplished by (review agent's name). Their certification is attached. (If applicable add... HTRW CX Certification(s) have been performed, and their certification is attached.) The District has completed a quality assurance audit and the subject project is in compliance with the contract requirements.

*(Signature) (Date)*

*Quality Assurance Team Leader and Team Members, Disciplines, Grades & Date*

\_\_\_\_\_  
Name , Project Engineer, QA Team Leader

\_\_\_\_\_  
Date

\_\_\_\_\_  
Names & Titles of Team Members

\_\_\_\_\_  
Date

\_\_\_\_\_  
Engineering Quality Manager

\_\_\_\_\_  
Date

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

And QUALITY ASSURANCE REVIEW

Significant concerns and the explanation of the resolution are as follows:

(Describe the major technical concerns, possible impact, and resolution)

As noted above, all concerns resulting from independent technical review of the project have been considered.

---

John L. Landahl, P.E., Chief of Engineering  
and Construction-Operations Division

---

Date



## Appendix O: Lessons Learned Loop

